AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-58 (Canceled).

59. (New) An isolated protein complex comprising a first protein which is TSG101 or a homologue or derivative or fragment thereof interacting with a second protein which is a retrovirus GAG polypeptide containing the P (T/S) AP late domain motif or a homologue or derivative or fragment of said retrovirus GAG polypeptide.

60. (New) The isolated protein complex of claim 59, wherein said retrovirus is a lentivirus.

61. (New) The isolated protein complex of claim 60, wherein said lentivirus is selected from the group consisting of HIV-1, HIV-2, and simian immunodeficiency viruses.

62. (New) The isolated protein complex of claim 59, wherein said second protein is a fusion protein containing (a) an HIV GAG polypeptide or (b) an HIV GAG polypeptide fragment.

63. (New) The isolated protein complex of claim 59, wherein said second protein is HIV GAGp6 or a homologue or derivative or fragment thereof.

64. (New) The isolated protein complex of claim 59, wherein said second protein is a fusion protein containing (a) an HIV GAGp6 polypeptide or (b) an HIV GAGp6 polypeptide fragment.

65. (New) The isolated protein complex of claim 64, wherein said HIV GAGp6 fragment comprises a contiguous span of at least 7 amino acid residues of a naturally occurring HIV GAGp6, said contiguous span containing a P(T/S)AP late domain motif.

66. (New) A method for making the protein complex of any one of claims 59-65, comprising the steps of (a) providing said first protein and said second protein; and (b) contacting said first protein with said second protein.

67. (New) A solid support comprising a protein complex immobilized thereon, said protein complex comprising a TSG101 protein or a fragment of TSG101 protein and a peptide comprising a P(T/S)AP domain.

68. (New) A method for selecting a molecule that modulates the interaction between said first and second protein in a protein complex of any one of claims 59-65, said method comprising: contacting said first protein with said second protein in the presence of said molecule; and detecting interaction between said first protein and said second protein.

69. (New) A method for selecting a molecule that modulate the interaction between said first and second protein in a protein complex of any one of claims 59-65, said method comprising: contacting said protein complex with a test compound; and detecting interaction between said first protein and said second protein.

70. (New) The method of claim 68, wherein at least one of said first and second proteins is a fusion protein having a detectable tag.

71. (New) The method of claim 68, wherein said contacting step is conducted in a substantially cell free environment.

72. (New) The method of claim 68, wherein said contacting step is conducted in a host cell.

73. (New) A composition comprising: (a) a first expression vector having a nucleic acid encoding the first protein according to any one of claim 59-65; and (b) a second expression vector having a nucleic acid encoding the second protein according to any one of claim 59-65.

74. (New) A host cell comprising the first and second expression vectors of Claim 73.

75. (New) A host cell comprising: a first expression cassette having a first promoter operably linked to a first nucleic acid encoding the first protein according to any one of claim 59-65; and a second expression cassette having a second promoter operably linked to a second nucleic acid encoding the second protein according to any one of claim 59-65.

76. (New) The host cell of claim 74, wherein said host cell is a yeast cell.

77. (New) The host cell of claim 74, wherein one of said first and second nucleic acids is linked to a nucleic acid encoding a DNA binding domain, and the other of said first and second nucleic acids is linked to a nucleic acid encoding a transcriptionactivation domain, whereby two fusion proteins can be produced in said host cell.

78. (New) The host cell of claim 77, further comprising a reporter gene, wherein the expression of the reporter gene is determined by the interaction between the first protein and the second protein.

79. (New) A method for selecting a compound capable of inhibiting a protein-protein interaction between TSG101 and HIV GAGp6, comprising: contacting a test compound with a protein selected from group consisting of (i) TSG101 protein, (ii) a TSG101 protein homologue having an amino acid sequence at least 90% identical to that of TSG101 and capable of interacting with HIV GAGp6, (iii) a TSG101 protein fragment containing the TSG101 UEV domain, and (iv) a fusion protein containing said TSG101 protein, said TSG101 protein homologue or said TSG101 protein fragment; and determining whether said test compound is capable of binding said protein.

80. (New) The method of claim 79, further comprising testing a test compound capable of binding said protein for its ability to interfere with a protein-protein interaction between TSG101 and HIV GAGp6.

81. (New) The method of claim 79 or 80, further comprising testing a test compound capable of binding said protein for its ability to inhibit HIV viral budding from an HIV infected host cell.

82. (New) A method for modulating, in a cell, a protein complex having a first protein which is TSG101 interacting with a second protein which is HIV GAG, said method comprising: reducing the concentration of said protein complex in the cell.

83. (New) The method of claim 82, wherein said reducing step comprising interfering with an interaction between said first protein and said second protein.

84. (New) The method of claim 83, wherein said reducing step comprises administering to the cell a compound capable of interfering with an interaction between said first protein and said second protein.

85. (New) The method of claim 84, wherein said compound is capable of binding TSG101.

86. (New) The method of claim 85, wherein said compound is capable of binding the UEV domain of TSG101 protein.

87. (New) The method of claim 82, wherein said reducing step comprises reducing the concentration of TSG101 in the cell.

88. (New) The method of claim 87, wherein said step of reducing the concentration of TSG101 in the cell comprises administering to the cell an antisense compound specifically hybridizing to a TSG101 nucleic acid.

89. (New) A method for inhibiting HIV viral budding from a host cell, comprising: interfering with an interaction between TSG101 and HIV GAG in the host cell.

90. (New) The method of claim 89, wherein said interfering step comprises administering to the host cell a compound capable of interfering with the interaction between TSG101 and HIV GAG.

91. (New) The method of claim 90, wherein said interfering step comprises administering to the host cell a compound capable of binding TSG101 protein.

92. (New) Use of an antisense compound specifically hybridizing to a TSG101 nucleic acid in inhibiting HIV budding, treating HIV infection or preventing AIDS.

93. (New) Use of a compound capable of binding TSG101 protein in inhibiting HIV budding, treating HIV infection or preventing AIDS.

94. (New) Use of a compound capable of interfering with the interaction between TSG101 and HIV GAG in inhibiting HIV budding, treating HIV infection or preventing AIDS.

95. (New) An isolated protein complex having a first protein which is Tsg101 or a homologue or derivative or fragment thereof interacting with a second protein which is HIV GAG polypeptide or a homologue or derivative or fragment thereof.

96. (New) The isolated protein complex of claim 95, wherein said second protein is HIV GAGp6 or a fragment thereof.

97. (New) The isolated protein complex of claim 95, wherein said first protein is a fusion protein containing (a) Tsg101 or (b) a Tsg101 homologue or (c) a Tsg101 fragment.

98. (New) The isolated protein complex of claim 95, wherein said second protein is a fusion protein containing (a) HIV GAG polypeptide or (b) a HIV GAG homologue or (c) a HIV GAG fragment.

99. (New) An isolated protein complex having a first protein which is Tsg101 or a homologue or derivative or fragment thereof interacting with a second protein which is HIV GAGp6 polypeptide or a homologue or derivative or fragment thereof.

100. (New) The isolated protein complex of claim 99, wherein said first protein is a fusion protein containing (a) Tsg101 or (b) a Tsg101 homologue or (c) a Tsg101fragment.

101. (New) The isolated protein complex of claim 99, wherein said second protein is a fusion protein containing (a) HIV GAGp6 polypeptide or (b) a HIV GAGp6 homologue or (c) a HIV GAGp6 fragment.

102. (New) An isolated protein complex comprising: (a) a first protein which is selected from group consisting of (i) Tsg101 protein, (ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6, (iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and (iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and (b) a second protein selected from the group consisting of (1) HIV GAG polypeptide, (2) a HIV GAG polypeptide homologue, (3) HIV GAGp6 protein, (4) a HIV GAGp6 homologue, (5) a HIV GAGp6 fragment capable of interacting with Tsg101, and (6) a fusion protein containing said HIV GAG polypeptide, said HIV GAG polypeptide homologue, said HIV GAGp6 protein, said HIV GAGp6 homologue or said HIV GAGp6 fragment.

103. (New) The isolated protein complex of claim 102, wherein said HIV GAGp6 fragment contains an amino acid sequence of SEQ ID NO:3.

104. (New) The isolated protein complex of claim 102, wherein said HIV GAGp6 fragment contains at least four amino acids of the PTAPP motif and one or more amino acids which naturally flank the PTAPP motif.

105. (New) The isolated protein complex of claim 102, wherein said HIV GAGp6 fragment has a contiguous span of at least 7 amino acid residues of a naturally occurring HIV GAGp6, said contiguous span containing a P(T/S)AP late domain motif.

106. (New) An isolated protein complex comprising: (a) a first protein which is selected from group consisting of (i) Tsg101 protein, (ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6, (iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and (iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and (b) a second protein selected from the group consisting of (1) a retrovirus GAG polypeptide having the P(T/S)AP late domain motif, (2) a homologue of said retrovirus GAG polypeptide, said homologue being capable of interacting with Tsg101, (3) a fragment of said retrovirus GAG polypeptide, said fragment being capable of interacting with Tsg101, and (4) a fusion protein containing said retrovirus GAG polypeptide, said retrovirus GAG polypeptide homologue or said retrovirus GAG polypeptide fragment.

107. (New) The isolated protein complex of claim 106, wherein said retrovirus is a lentivirus.

108. (New) An isolated protein complex comprising: a first fusion protein having a Tsg101 protein fragment interacting with a second fusion protein containing a fragment of HIV GAG polypeptide.

109. (New) A method for making the protein complex of claim 95, comprising the steps of: providing said first protein and said second protein; and contacting said first protein with said second protein.

110. (New) A solid support comprising the protein complex of claim 95 immobilized thereon.

111. (New) A method for selecting modulators of a protein complex according to claim 102, comprising: providing the protein complex; contacting said protein complex with

a test compound; and determining the presence or absence of binding of said test compound to said protein complex.

112. (New) A method for selecting modulators of an interaction between a first protein and a second protein, (a) said first protein being selected from group consisting of (i) Tsg101 protein, (ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6, (iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and (iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and (b) said second protein being selected from the group consisting of (1) HIV GAG polypeptide, (2) a HIV GAG polypeptide homologue, (3) HIV GAGp6 protein, (4) a HIV GAGp6 homologue, (5) a HIV GAGp6 fragment capable of interacting with Tsg101, and (6) a fusion protein containing said HIV GAG polypeptide, said HIV GAG polypeptide homologue, said HIV GAGp6 protein, said HIV GAGp6 homologue or said HIV GAGp6 fragment, said method comprising: contacting said first protein with said second protein in the presence of one or more test compounds; and determining the interaction between said first protein and said second protein.

113. (New) The method of claim 112, wherein at least one of said first and second proteins is a fusion protein having a detectable tag.

114. (New) The method of claim 112, wherein said contacting step is conducted in a substantially cell free environment.

115. (New) The method of claim 112, wherein said contacting step is conducted in a host cell.

116. (New) A method for selecting modulators of an interaction between a first protein and a second protein, (a) said first protein being selected from group consisting of (i) Tsg101 protein, (ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6, (iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and (iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and (b) said second protein being selected from the group consisting of (1) a retrovirus GAG polypeptide having the P(T/S)AP late domain motif, (2) a homologue of said retrovirus GAG

polypeptide, said homologue being capable of interacting with Tsg101, (3) a fragment of said retrovirus GAG polypeptide, said fragment being capable of interacting with Tsg101, and (4) a fusion protein containing said retrovirus GAG polypeptide, said retrovirus GAG polypeptide homologue or said retrovirus GAG polypeptide fragment, said method comprising: contacting said first protein with said second protein in the presence of one or more test compounds; and determining the interaction between said first protein and said second protein.

117. (New) The method of claim 116, wherein said contacting step is conducted in a substantially cell free environment.

118. (New) The method of claim 116, wherein said contacting step is conducted in a host cell.

119. (New) A method for selecting modulators of the protein complex of claim 102 or 106, comprising: contacting said protein complex with a test compound; and determining the interaction between said first protein and said second protein.

120. (New) A composition comprising: (a) a first expression vector having a nucleic acid encoding a first protein which is selected from group consisting of (i) Tsg101 protein, (ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6, (iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and (iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and (b) a second expression vector having a nucleic acid encoding a second protein selected from the group consisting of (1) HIV GAG polypeptide, (2) a HIV GAG polypeptide homologue capable of interacting with Tsg101, (3) HIV GAGp6 protein, (4) a HIV GAGp6 homologue capable of interacting with Tsg101, (5) a HIV GAGp6 fragment capable of interacting with Tsg101, and (6) a fusion protein containing said HIV GAG polypeptide, said HIV GAG polypeptide homologue, said HIV GAGp6 protein, said HIV GAGp6 homologue or said HIV GAGp6 fragment.

121. (New) A host cell comprising: (a) a first expression vector having a nucleic acid encoding a first protein which is selected from group consisting of (i) Tsg101 protein, (ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of

Tsg101 and capable of interacting with HIV GAGp6, (iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and (iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and (b) a second expression vector having a nucleic acid encoding a second protein selected from the group consisting of (1) HIV GAG polypeptide, (2) a HIV GAG polypeptide homologue capable of interacting with Tsg101, (3) HIV GAGp6 protein, (4) a HIV GAGp6 homologue capable of interacting with Tsg101, (5) a HIV GAGp6 fragment capable of interacting with Tsg101, and (6) a fusion protein containing said HIV GAG polypeptide, said HIV GAG polypeptide homologue, said HIV GAGp6 protein, said HIV GAGp6 homologue or said HIV GAGp6 fragment.

122. (New) The host cell of claim 121, wherein said host cell is a yeast cell.

123. (New) The host cell of claim 121, wherein said first and second proteins are expressed in fusion proteins.

124. (New) The host cell of claim 121, wherein one of said first and second nucleic acids is linked to a nucleic acid encoding a DNA binding domain, and the other of said first and second nucleic acids is linked to a nucleic acid encoding a transcription-activation domain, whereby two fusion proteins can be produced in said host cell.

125. (New) The host cell of claim 121, further comprising a reporter gene, wherein the expression of the reporter gene is determined by the interaction between the first protein and the second protein.

126. (New) A host cell comprising: (a) a first expression vector having a nucleic acid encoding a first protein which is selected from group consisting of (i) Tsg101 protein, (ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6, (iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and (iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and (b) a second expression vector having a nucleic acid encoding a second protein selected from the group consisting of (1) a retrovirus GAG polypeptide having the P(T/S)AP late domain motif, (2) a homologue of said retrovirus GAG polypeptide, said homologue capable of interacting with Tsg101, (3) a fragment of said retrovirus GAG polypeptide, said fragment being capable of interacting with

Tsg101, and (4) a fusion protein containing said retrovirus GAG polypeptide, said retrovirus GAG polypeptide homologue or said retrovirus GAG polypeptide fragment.

127. (New) A method for selecting a compound capable of inhibiting a protein-protein interaction between Tsg101 and HIV GAGp6, comprising: contacting a test compound with a protein selected from group consisting of (i) Tsg101 protein, (ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6, (iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and (iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and determining whether said test compound is capable of binding said protein.

128. (New) The method of claim 127, further comprising testing a test compound capable of binding said protein for its ability to interfere with a protein-protein interaction between Tsg101 and HIV GAGp6.

129. (New) The method of claim 128, further comprising testing a test compound capable of binding said protein for its ability to inhibit HIV viral budding from an HIV-infected host cell.